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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/079,956

02/19/2002

Roberto Padovani

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EXAMINER

HO, DUC CHI

ART UNIT

PAPER NUMBER

2419

NOTIFICATION DATE

DELIVERY MODE

08/19/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

us-docketing@qualcomm.com  
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<b>Office Action Summary</b>	<b>Application No.</b> 10/079,956	<b>Applicant(s)</b> PADOVANI ET AL.	
	<b>Examiner</b> DUC C. HO	<b>Art Unit</b> 2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 May 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3-7,10-22,24-28,30-43 and 46-50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14-22,24-26 and 32-41 is/are allowed.
- 6) ☒ Claim(s) 1,7,27,28,30,31,42,43 and 50 is/are rejected.
- 7) ☒ Claim(s) 3-6, 10-13, 46-49 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 27-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 27 is indefinite. Claim 27 recites "a receiver for determining a first data bit of said QPCH" in line 3, there is no correlation between this limitation and the rest of the claim's limitations.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102(b) that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –  
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 7, 42, 43, and 50 are rejected under 35 U.S.C. 102(b) as being anticipated by Rich (US 5,940,452).

Regarding claim 1, Rich discloses dual mode radio subscriber unit having a diversity receiver apparatus and method therefore.

Regarding claim 1, Rich discloses dual mode radio subscriber unit having a diversity receiver apparatus and method therefore. In Rich a radio system 100-fig.1 comprising a first antenna 114, a second antenna 116, a receiver 126 common to both antennas 114 and 116 and a controller 108, see col. 4, lines 32-42, and col. 4-line 62 to col. 5-line 58.

*a receiver, including a plurality of receiver chains (a radio system 100-fig.1 comprising a first antenna 114, a second antenna 116, see col. 4, lines 32-42, and col. 4-line 62 to col. 5-line 58), for receiving a pilot channel and determining a channel condition of said pilot channel (for receiving a pilot channel  $E_c/I_o$  and a determined ratio of the channel, see step 604-fig.6)*

*a control system (a controller 108-fig.1) for controlling receive diversity and power consumption of said receiver by selecting a number of said plurality of receiver chains based on said determined channel condition (the controller 108-fig.1 selects the first state, namely selecting only the first antenna 114 as a number of antenna, see step 607, based the determined factor 604. The selection of one antenna reflects the power consumption of one antenna of the receiver), wherein said control system is configured for reducing said number of selected receiver chains when said determined channel condition is above a first channel condition threshold (in response to the channel condition  $E_c/I_o$  above a predetermined threshold, see step 606-fig.6, the control channel stays in the selected state or the first state, which is a selection of only one antenna instead of two antenna. In other words, it could be said that the controller 108 is configured for reducing a selection of two antennas to one antenna.)*

Regarding claim 7, this claim has similar limitations as claim 1. Therefore, it is rejected under Rich for the same reasons set forth in the rejection of claim 1.

Regarding claim 42, this claim has similar limitations as claim 1. Therefore, it is rejected under Rich for the same reasons set forth in the rejection of claim 1.

Regarding claim 43, this claim has similar limitations as claim 1. Therefore, it is rejected under Rich for the same reasons set forth in the rejection of claim 1. The radio system should

include a computer readable storage medium, i.e. memory, storing instructions, for performing the claimed steps.

Regarding claim 50, this claim has similar limitations as claim 1. Therefore, it is rejected under Rich for the same reasons set forth in the rejection of claim 1.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rich (US 5,940,452), in view of Willey (US 6,505,058).

Regarding claim 27, Rich discloses dual mode radio subscriber unit having a diversity receiver apparatus and method therefore. In Rich a radio system 100-fig.1 comprising a first

antenna 114, a second antenna 116, a receiver 126 common to both antennas 114 and 116 and a controller 108 (corresponding to a receiver includes a plurality of receiver chain for receive diversity). In response to a ratio of  $E_c/I_o$  (corresponding to a channel condition of a pilot channel received at a receiver), the controller 108 either selects one of the antennas or both (corresponding to a control system for selecting a number of the plurality of receiver chains). In each case, whether the controller selects the antenna 114, or the antenna 116 or both, the power consumption of the receiver 126 is controlled based on the selection of the receive antenna, see col. 4, lines 32-42, and col. 4-line 62 to col. 5-line 58. Rich, however, does not teach a receiver for determining a first data bit of the QPCH.

Willey discloses a method for determining whether to wake up a mobile station. The mobile station receives a QPCH bit representing by “On” (corresponding to 1), “Off” (corresponding to zero), and “not certain” (corresponding to erasure). “On” also means the base station’s clearly transmitted the bit. This further means that the mobile station should not in sleep mode, so that it could receive data from the base station, see col. 5, lines 56-67, and col.5-line 45 to col.6-line 7.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine Rich with Willey. The suggestion/motivation for doing so would have been to provide a mobile station a capability of using a single bit message of QPCH, transmitted from the base station, for the purpose of conserving a power source in the mobile station.

Regarding claim 28, Willey teaches if the CCI bit set to “OFF” the mobile station goes to sleep, see step 447-fig.4.

***Allowable Subject Matter***

7. Claims 3-6, 10-13, 46-49 are objected to as being independent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims
8. Claims 30-31 would be allowable if claim 27 rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.
9. Claims 14-22, 24-26, 32-41 are allowed.

***Response to Arguments***

10. Applicant's arguments with respect to claims 1, 7, 14, 27, 42, 43 and 50 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc Ho whose telephone number is (571) 272-3147. The examiner can normally be reached on Monday through Thursday from 7:30 am to 6:00 pm.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel, can be reached on (571) 272-2988.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-2600.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2419

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patent Examiner

/DUC C HO/

Primary Examiner, Art Unit 2419

08-15-09